ZooCADA™

Zoological Control And Data Acquisition System

The ZooCADA system is a modular, networked, software and hardware solution designed to automatically monitor, record, and control animal enclosure environments, and back-of-house plant, at zoological parks.

★ Control enclosure climate and lighting with seasonal variation.

★ Collect enclosure climate data to support research and management.

★ Email enclosure temperature errors and other alarms to staff.

★ Enable staff to focus more on animal care and conservation tasks.

Meet The ZooCADA Family

ZooCADA-Log: Climate monitoring for exhibit enclosures.
- Monitor and log enclosure and external temperature and relative humidity measurements.
- Monitor and log enclosure soil moisture and temperature measurements. (Optional)
- Alarm email messages for enclosure temperature too high or too low, and other system events.
- Datalogger web interface enables remote viewing of station measurements and other parameters.
- Data files downloadable to Windows based PC using Campbell Scientific LoggerNet software.

ZooCADA-HVAC: Climate monitoring and control for exhibit enclosures.
- All ZooCADA-Log functions plus...
- Fully automated control of enclosure ventilation fan and air conditioning equipment.
- Enclosure climate maintained with automatic seasonal temperature variation using monthly setpoints.
- Run times of the ventilation fan and air conditioning logged as hourly and daily totals.
- Manual override controls.

ZooCADA-Life: Complete environment monitoring and control for nocturnal or diurnal exhibit enclosures.
- All ZooCADA-HVAC functions plus...
- Four channel lighting controller designed for permanently installed, dimmable, lighting loads.
- Configurable channels for plant grow lights. (Daylight lighting) and LED ribbon lights. (Moonlight lighting)
- Gradual transition between daylight and moonlight lighting phases using dimmer crossfade.

ZooCADA-Lab: Environment monitoring and control for breeding labs and hospital rooms.
- All ZooCADA-Life functions, except soil sensor, plus...
- Lighting control designed for pluggable, non-dimmable, lighting loads.
- Lighting control user selectable for various diurnal and nocturnal modes.
- Up to nine portable temperature and relative humidity sensors for microclimate monitoring.

ZooCADA-Store: Monitoring for food storage rooms.
- Monitor and log the temperatures of 3 food storage rooms, typically a walk-in Freezer, Fridge, and Pantry.
- Alarms for each room temperature too high or too low, power failure, and other system events.
- Door open too long alert sounder, and door left open alarm.
- Safety panic alarm to summon help if person trapped in a refrigerated room.

ZooCADA-Met: Weather Station for climate monitoring.
- Monitor and log the air temperature, relative humidity, dew point, barometric pressure.
- Monitor and log solar radiation, rainfall and lightning strikes.
- Alarms for high wind speed, high rainfall, and high and low air temperature.
- Data shared via IP network to all ZooCADA stations on the network.

ZooCADA-Mod: Customisation Module.
- Add custom sensors, processing and/or data logging to ZooCADA station for site specific applications.

ZooCADA is a modular, zoo-wide, networked, control and data acquisition system. Each station is able to operate standalone or as an integral part of a fully networked site-wide system. Using our modular approach, up to 4000 stations, distributed over any geographic area can be networked providing that network connectivity (typically the site's IP computer network) is available at each station.

Adena Scientific believes that accuracy and reliability are paramount requirements of any system used in applications that support animal welfare, so we purpose designed our ZooCADA system to meet zoological needs, and built it to run on dataloggers manufactured by Campbell Scientific in the USA and available worldwide.

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